SOIL CONSERVATION LITERATURE
SELECTED CURRENT REFERENCES

V.6 May/June,1942 No.3

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Washington, D. C.

PERIODICAL ARTICLES

Beavers

Scheffer, P. M. Beaver on trial. U. S. Soil Conserv. Serv. Soil Conserv.7(10):239-241,illus. Apr. 1942. 1.6 So3S
"Scientists estimate that in primitive times the dams of 60 million beavers held back flood waters in what is now the United States. Exploited for their valuable fur, beavers have been reduced to a very small fraction of their original numbers, but with the help of many conservation agencies, these animals are coming back."

Conservation

Bunce, A. C. Public policy and action for conservation. Jour. Farm Econ.24(1):97-108. Feb. 1942. 280.8 J822

Ciriacy-Wantrup, S. V. Private enterprise and conservation. Jour. Farm Econ.24(1):75-96. Feb. 1942. 280.8 J822
Paper No.102 The Giannini Foundation of Agricultural Economics.
Discusses, (1) The meaning of conservation; (2) Conservation in relation to the problem of maximizing net revenues over time; (3) Factors affecting conservation; (4) Conclusions with respect to the relation of private and social economics of conservation.

Human conservation in northern Wisconsin. U. S. Soil Conserv. Serv. Soil Conserv.7(11):284-286,288. May 1942. 1.6 So3S
Observations presented from a report by F. A. Fisher, Upper Mississippi region, after a field review of the Wisconsin Isolated Settler project activities.

Myer, D. S. War production and conservation. U. S. Bur. Agr. Econ. Agr. Situation 26(4):[1]-3. Apr. 1942. 1 Ec7Ag

Conservation. Study and Teaching

Cummings, R. E. Conservation in the schools. Projects must supplement class work. Conserv. Volunteer 4(20):5-8. May 1942. 279.8 C765
"Teaching of conservation should be required in our schools, starting in the grades, the writer believes."

Contour Farming

Knoblauch, H. C. Contour tillage of corn under New Jersey conditions in relation to soil and water conservation, crop yields, and various soil properties. Amer. Soc. Agron. Jour.34(3):263-269,illus. Mar. 1942. 4 Am34P
"Literature cited," p.269.
"Soil and water losses, silage corn yields, soil-moisture tension conditions, and changes in total nitrogen and carbon are presented for planting on the contour vs. planting with the slope on Dutchess loam soil in northern New Jersey.
"Soil losses for a 3-year period of 3.6 tons per acre under contour planting compared with 24.9 tons per acre under up-and-down-hill planting were found to be highly significant. Corn planted on the

contour on the same land for 4 years in succession produced an average annual yield on the green weight basis of 11.37 tons per acre, while plots planted up and down hill gave a yield of 10.00 tons. Tensiometer readings suggested a probable relationship between increased moisture content under contour tillage and higher silage corn yields.

"Soil nitrogen and organic matter showed a marked decrease during the period of study under both systems of management. Decreases in soil nitrogen indicate the importance of using a cover crop in connection with the efficient utilization of nitrogen under both systems of management as well as for providing soil protection during the vulnerable winter months.

"In order to obtain maximum conservation of soil resources and highest yields, silage corn should be planted on the contour and limited to land in a long grass or legume rotation. The growing of corn more than 1 year in succession on the same land is to be discouraged."

No more up-and-down farming. Contouring demonstrations show farmers how to crop slopes without heavy washing. Wallaces' Farmer and Iowa Homestead 67(9):274, illus. May 2, 1942. 6 W15

Cover Crops

Culbertson, R. E. Grasses and legumes as cover crops. Amer. Nurseryman 75(8):5-8. Apr. 15, 1942. 80 Am371

"References," p.8.

"Engaged in investigation several hundred varieties of grasses and legumes, the associate agrostologist of the Soil Conservation Service, region 1, Upper Darby, Pa., describes some of special usefulness to nurserymen and recommends soil-conserving procedures for their land."

Horth, C. J. Cover cropping in irrigated orchards. With special reference to the Murrumbidgee irrigation area. Agr. Gaz. N. S. Wales 52(pt.7):375-379, illus. July 1, 1941. 23 N472

"In the first instalment of this article which appeared in June issue, Mr. Horth suggested that horticulturalists on the Irrigation Area might, with benefit, review the present methods of management of their orchard soils with the object of maintaining the structure of the soil under irrigation conditions by the growing of rotations of cover crops.

"The practical difficulties of putting such a scheme of soil usage into operation were discussed, as well as the disadvantages.

"In this concluding portion, the value of various species as summer and winter cover crops and as green manure crops, is discussed and some practical suggestions made in relation to the management of the orchard soils under irrigation."

Dunes

Clement, Ray. Sand dunes state forest [Sherburne co., Minn.] A new recreational area. Conserv. Volunteer 4(20):23-25, illus. May 1942. 279.8 C765

Oosting, H. J., and Billings, W. D. Factors effecting vegetational zonation on coastal dunes. Ecology. 23(2):131-142, illus. Apr. 1942. 410 Ec7

Farm Forestry

Dambach, C. A. Ten years of protection. U. S. Soil Conserv. Serv. Soil Conserv.7(10):252-254,illus. Apr. 1942. 1.6 So3S
"A cardinal principle of soil conservation is the protection of woodlands from destructive fire and grazing. In an Ohio farm woods this resulted in an increased volume of timber, greater yields of maple sugar, a mellowing and enriching of the soil, and excellent reproduction of valuable trees. Significantly, the insect-destroying birds were found to be four times as numerous as in adjacent mistreated woodlands."
Preston, J. F. The field for farm forestry in the farm conservation program of the Soil Conservation Service. Jour. Forestry 40(4):291-295. Apr. 1942. 99.8 F768

Fence Rows

Dambach, C. A. Fence row facts. U. S. Soil Conserv. Serv. Soil. Conserv.7(10):238. Apr. 1942. 1.6 So3S
"Fence rows can't be farmed, but they can be managed for the benefit of adjacent crops. Each 2 miles of clean fence row amounts to an acre of wasted land that could be used to improve biologic conditions on farmland. Simple ways to make these thin strips of land useful in agriculture form the substance of this article."

Floods and Flood Control

Morris, G. A. Flood control for the Yazoo Valley, Miss. Civ. Engin. 12(5):243-246,illus. May 1942. 290.8 C49
"Development of a comprehensive plan for flood control in the Yazoo basin was complicated by the many interrelated streams, old and inadequate levee systems, and Mississippi River backwater. Extended studies led to the selection of four headwater reservoirs, supplemented by levees, cutoffs, and channel improvements. What let to this plan, how the reservoir and other work is being carried out, and what it promises to accomplish comprise the subject matter of this paper. In a compact form it gives an analysis of conditions throughout the valley, together with the solution of this major flood control problem."

Forest Influences

Skorodumov, A. S. The influence of forest plantations on the water-absorption rate of structureless ploughed soils. Lesnoe Khozyaystvo, Moscow no.3, pp.7-14. 1941. 99.8 L562
Article in Russian.
"Experiments in the Chernigov region in different forest stands aged up to 25 years, which had been planted on formerly ploughed, podzolized loess soils, showed that water penetration into the surface soil was slower than in comparable soils under agricultural crops. This confirmed similar observations previously made by several Russian workers." Abs. Forestry Abs.3(3):198. 1942

Grasses and Grasslands

Graham, E. H. Grasses for soil and wildlife conservation. U. S. Soil Conserv. Serv. Soil Conserv.7(10):244-247,250,illus. Apr. 1942. 1.6 So3S

"Grasses have always been of primary importance to man. That they provide first-class cover as well as food for wildlife is less well known. A summary account here points to many soil-conserving grasses that provide for wildlife welfare."

Hooker, P. K., and Statton, C. H. King grass returns to the kingdom of Callaway [co.,Mo.] U. S. Soil Conserv. Serv. Soil Conserv.7(11): 273-276,illus. May 1942. 1.6 So3S

Ives, Howard. Brome and crested wheat grass march on. Successful Farming 40(4):21,38,illus. Apr. 1942. 6 Sul2

Kaleski, L. G. Grassland improvement on the Southern Tablelands of New South Wales. Agr. Gaz. N. S. Wales 52(pt.7):347-351,illus. July 1, 1941. 23 N472

"Successful grassland improvement by the use of introduced pasture species and application of fertilisers, depends upon a sound knowledge of the soils and climate of the locality - the pasture species chosen must suit the prevailing conditions.

"The wide range of soil types that occur on the Southern Tableland and the variation in the incidence and reliability of the rainfall together require the employment of numerous grassland improvement methods in this part of the State. In the June issue Mr. Kaleski discussed sown pastures suitable to the soils and rainfall of various parts of the Southern Tableland to the north of Goulburn. In this issue he deals with the areas further south. Graphs are included to show the monthly expectancy of the rainfall in three years out of four - a method of rainfall computation that is of great value in pasture work."

Throckmorton, R. I. The plains country perfects its native grasses. Country Gentleman 112(5):8,52-53,illus. May 1942. 6 C833

"At last research men have developed ways to harvest seed of buffalo and grama, to force better germination and to get thick stands."

Green Manuring

Chowdhury, S. Soil improvement by green manuring. Allahabad Farmer 15(5):[234]-252. Sept. 1941. 22 A15

"From time immemorial the turning under of a green crop to supply organic matter to the soil has been a common agricultural practice. Records show that the use of beans, vetches and lupine for such a purpose was well understood by the Romans, who probably borrowed the practice from nations of still greater antiquity. The art was lost to a greater extent during the Dark ages, but was revived again as the modern era was approached. At the present time green manuring is considered a sound way of improving soil fertility."

Gully Control

Aylen, Douglas. Gully control: some recent successes. Rhodesia Agr. Jour.39(2):73-87,illus. Mar./Apr. 1942. 24 R34

Zeasman, C. R. Bill Reichle's triumph over the gully. Wis. Conserv. Bul.7(4):28-31,illus. Apr. 1942. 279.8 W752

Highway Erosion Control

Izzard, C. F. The design of roadside drainage channels. U. S. Pub. Roads Admin.,Pub. Roads 23(1):1-4,13-16,illus. Mar. 1942. 1 R53P

"Good surface drainage is an important element in the safe, convenient, and economical use of a highway. This report presents a procedure for analyzing drainage problems and designing channels to avoid future difficulty and abnormal expense in maintaining the surface drainage system. This procedure consists of first estimating the peak rate of runoff from each drainage area contributing to channels along the highway; second, checking the ability of these channels to carry the estimated discharge without eroding or overflowing; and third, designing protection against erosion or designing modified channel sections for increased capacity where necessary.

"This discussion is limited to consideration of the problem in humid sections of the country where sod can be readily established. The 'thatching' action of sod in protecting the soil from erosion increases manyfold the depth of water that may be satisfactorily carried in a channel and also increases the maximum gradient permissible for such a channel. The cost of providing sod is usually substantially less than the cost of paved gutters, the design of which is also discussed."

Hillculture

Brooks, Maurice. Hill culture for national defense - and afterward. U. S. Soil Conserv. Serv. Soil Conserv.7(11):270-272,286,illus. May 1942. 1.6 So3S

Hydraulics

Gunder, D. F. Profile curves for open-channel flow. Amer. Soc. Civ. Engin. Proc. 68(4):pt.1:535-542,illus. Apr. 1942. 290.9 Am3P

"Certain irregularities appearing in the surface profile curves for gradually varied flow are discussed in this paper."

Hall, L. S. Drop structures for erosion control. East Bay Municipal Utility District, California, in collaboration with Soil Conservation Service, controls erosion on watershed lands. Civ. Engin.12(5):247-250,illus. May 1942. 290.8 C49

"On one California watershed, reservoir sedimentation surveys showed an erosion rate of 185 cu ft per acre annually. This condition called for serious consideration and the collaboration of the Soil Conservation Service. The structures used to meet the problem are here described in detail by Mr. Hall, and their behavior under heavy runoff is shown by numerous photographs. These, and the accompanying explanation, should be of considerable value to engineers interested in soil conservation on a watershed of this type. The article was originally presented as a discussion before the Hydraulics Division at the San Diego Convention of the Society."

Hall, L. S., and Christiansen, J. E. Hydraulic design of drop structures for gully control. Discussion. Amer. Soc. Civ. Engin. Proc.68(5): 812-818,illus. May 1942. 290.9 Am3P

Interception

Wicht, C. L. An approach to the study of rainfall interception by forest canopies. Jour. So. African Forestry Assoc. no.6, pp.54-70. 1941. 99.9 So82

"References," pp.69-70.

"An interception experiment carried out in a stand of Poplars in Jonkershoek is described and the data obtained are used in a discussion of the experimental method and technique. It is pointed out that the method of paired stations inside and outside the forest is not entirely satisfactory and three improvements are suggested: (1) rainfall should be gauged above the canopy as well as in an adjacent open field, (2) all gauges should be sheltered from wind and (3) the gauging technique used in the forest should be duplicated in the open and above the canopy.

"Measurements of penetrations are analysed to test the accuracy of the sampling technique. It is shown that the variation in drip and direct penetration under various parts of the canopy is considered. To obtain a mean estimation in the Poplar stand with a preselected standard error of 5 per cent, it is calculated that more than nineteen gauges would be required. A technique for measuring stem run-off was also tested and minor improvements are recommended.

"Data of rainfall interception and penetration in the Poplar stand show that 32.27 in. of rain, or about 92.0 per cent. of downpour in the open, reached the forest floor. The penetration and interception varied greatly in amount and nature, according to whether the trees were in leaf or bare. Direct penetration and drip through trees in leaf was 79.7 per cent.; through bare trees 82.1 per cent. Stem run-off from trees in leaf was 6.1 per cent.; from bare trees 14.9 per cent. Interception by trees in leaf was 14.2 per cent.; by bare trees 3.0 per cent. From author's summary."

Irrigation and Drainage

Boone, A. R. 'Water, water, everywhere." Multiple-purpose Central Valley Project in California involves huge dams, five canals. Sci. Amer.166(4):178-179,illus. Apr. 1942. 470 Sci25

Clark, C. O., Horner, W. W., and Wilson, W. T. Drainage of leveed areas in mountainous valleys. Discussion. Amer. Soc. Civ. Engin. Proc.68(5):827-836,illus. May 1942. 290.9 Am3P

Paper with above title, by Gordon R. Williams, appeared in January 1942 Proceedings.

Huffman, R. E., and Paschal, J. L. Integrating the use of irrigated and grazing land in the Northern Great Plains. Jour. Land. and Pub. Util. Econ.18(1):[17]-27. Feb. 1942. 282.8 J82

Irrigation water gauges. Home-made devices for measuring flows. "V" notch and rectangular weir. Citrus News 18(3):35,40,illus. Mar. 1942. 80 C494

Johnston, C. N. Facts on irrigation wells. Pacific Rural Press and Calif. Farmer 143(9):290-291. May 2, 1942. 6 P112

Matson, Howard. Maintaining open drainage ditches by grazing. Agr. Engin.23(5):169,illus. May 1942. 58.8 Ag83

Sherman, L. K. Drainage of leveed areas in mountainous valleys. Discussion. Amer. Soc. Civ. Engin. Proc.68(4)pt.1:612-614. Apr. 1942. 290.9 Am3P
Paper with above title by Gordon R. Williams appeared in January 1942 Proceedings.

Turnbull, James. Drainage and the food for freedom program. U. S. Soil Conserv. Serv. Soil Conserv.7(11):265-266,illus. May 1942. 1.6 So3S

Kudzu

Davison, V. E. Does kudzu have wildlife value? U. S. Soil Conserv. Serv. Soil Conserv.7(10):253. Apr. 1942. 1.6 So3S

Herbison, H. W., and Muehlbeier, John. Organization and operation of rural land-use planning. Planners' Jour.8(2):12-18. Apr./June 1942. 98.58 P692

Land Use Planning

Fanning, J. W. Farm planning to meet the needs of the man, the land, and the nation. Com. Fert.64(5):16-19,30. May 1942. 57.8 C73

Foster, Ellery. The development of rural land-use planning committees: A historical sketch. Planners' Jour.8(2):3-11. Apr./June 1942. 98.58 P692

Locust Trees

Stoutemyer, V. T., and others. Vegetative propagation of black locust. Amer. Nurseryman 75(9):7-9,illus. May 1, 1942. 80 Am371
"Now that several nurserymen are stocking some of the superior strains of locust, there is timely help in this article describing the vegetative methods of propagating these strains, by members of the staff of the Bureau of Plant Industry and the Soil Conservation Service of the United States Department of Agriculture."

Lysimeters

Neller, J. R., and Forsee, W. T., jr. A lysimeter for organic soils. Amer. Soc. Agron. Jour.34(4):345-352,illus. Apr. 1942. 4 Am34P
"Literature cited," p.352.
"The conventional type of lysimeter with underground outlets is not feasible for a study of arable organic soils for the reason that the water table must be held fairly near the surface in order to have good growing conditions as well as to conserve the soil. Accordingly, the lysimeters described in this paper were installed above the surrounding soil surface in a structure that is filled with soil. Field conditions are thereby maintained except that the lysimeter soil surface is 4 feet above that of the adjacent fields.
"Details of the installation are given as well as of a subirrigation device which simulates the type of subirrigation at controlled water table levels as practiced in cultivated lands of the Everglades.

"In the present study these lysimeters contain one type of soil only, this being the sawgrass peat typical of most of the Everglades area. Vegetable and grass crops are being grown at different fertilizer levels in the lysimeters and information is being obtained concerning the utilization and availability of added plant food elements, both primary and secondary."

Mulching

Baker, C. E. Mulching restores productivity of devitalized apple trees. Amer. Fruit Grower 62(5):11,14-15,illus. May 1942. 80 G85

Heath, M. E. Evaluation of mulch as a supplemental practice in roadside seedling establishment. U. S. Soil Conserv. Serv. Upper Miss. Reg. Prog. Exch. Tech. Sup. 6pp., mimeogr. Milwaukee, Mar. 27, 1942. 1.9605 P941

"References," pp.4-5.

Summary: "1. Strawy manure mulch was one and one-half to four times more effective than no mulch in seedling establishment of four common grasses on a 2-to-1 subsoil road cut.

"2. Soil loss, run-off, and seed loss were observed to be very large from the unmulched areas as compared with no noticeable losses of seed and soil from the areas protected by mulch.

"3. The practitioner should consider the use of mature grass (carrying mature seed), such as bromegrass, orchard grass, bluegrass, timothy, etc., on slopes of cuts and fills, thus serving the dual purpose of seeding and mulching."

Nursery Stock

Deppa, J. W. Nursery-grown structural members. Jour. Forestry 40(4): 324-326,illus. Apr. 1942. 99.8 F768

"The successful planting of arroyo sites in the southwest is a difficult job at best. Ordinary planting stock is poorly adapted to many arroyo sites. The Soil Conservation Service has investigated the production of 'tailor-made' nursery stock for arroyo planting. The results of this study are here reported."

Ponds

Austin, S. W. A story of pond protection. U. S. Soil Conserv. Serv. Soil Conserv.7(10):262,illus. Apr. 1942. 1.6 So3S

Compton, L. V. Food from ponds. U. S. Soil Conserv. Serv. Soil Conserv.7(10):236-237. Apr. 1942. 1.6 So3S

"Total war to the Axis nations means utilization of every available resource. A specific instance involving fish production provides food for thought in this country. Resources in the United States are enormous, but they must be developed and utilized if they are to be totally effective."

Range Plants

Fiero, Kenneth. Utilization of range plants on Wyoming winter sheep ranges. U. S. Soil Conserv. Serv. Soil Conserv.7(11):281-284,illus. May 1942. 1.6 So3S

Run-off

Garstka, W. U., and Millar, C. E. A year's record of rainfall run-off and soil erosion at Michigan state college. Mich. Agr. Exp. Sta. Quar. Bul.24(3):199-205. Feb. 1942

Johnston, C. N. Tilt buckets for measuring run-off and erosion. Agr. Engin.23(5):161-162,illus. May 1942. 58.8 Ag83

Sedimentation and Silt

Hough, J. L. Sediments of Cape Cod Bay, Massachusetts. Jour. Sedimentary Petrol.12(1):10-30,illus. Apr. 1942. 398.8 J82

"References," p.30.

"Cape Cod Bay, lying on the Massachusetts coast partly enclosed by Cape Cod, is in a glaciated region of low relief. Coarse sediments generally occur in areas exposed to wave and current action as in shallow water near shore or on shoals, and in the deep channel north of the tip of Cape Cod, which is swept by tidal currents. Fine sediments are restricted to the deeper water in the central portion of the Bay, and to the small, well-protected embayments of the shores.

"Most of the sediments are well sorted as compared with other shallow-water marine sediments. Within the Bay, the coarser materials generally have the highest degree of sorting while the finer sediments invariably are more poorly sorted. Fine-grained materials contain a small amount of organic matter and generally are stratified in layers 1 to 2 cm. thick. Sphericity of the pebbles varies but little and in a random manner, but roundness decreases with increasing depth of water.

"A previously described hard bottom zone in Massachusetts Bay was traced into Cape Cod Bay. This hard bottom consists of a concentrate of pebbles produced by wave and current erosion of glacial drift on the bottom under present conditions.

"The sediments studied are similar to those in Buzzards Bay, Massachusetts Bay and San Francisco Bay, but they differ somewhat from those of the continental shelf, a more exposed environment, and from those of Barataria Bay, a more protected environment."

Parent, R. C. The silt load of the Saint John River and its tributaries - A preliminary report. C. S. T. A. Rev. no.32, pp.19-22,27,illus. Mar. 1942. 7 C167C

"References," p.27.

"The watershed of the St. John River, New Brunswick, covers approximately 26,000 square miles - the largest watershed of any river in North America emptying into the Atlantic Ocean south of the St. Lawrence. In this area are some of the most productive upland soils in New Brunswick. But rivers carry away enormous quantities of this rich upland soil every year. Some idea of the amount of this annual loss and how to prevent it are discussed in this important article."

Swenson, F. A. Sedimentation near junction of Maquoketa and Mississippi rivers. Jour. Sedimentary Petrol.12(1):3-9,illus. Apr. 1942
398.8 J82

"Sediment samples indicate that the Maquoketa River has been, in the past an important factor in the deposition that has taken place in the Mississippi River in a reach extending at least 4-1/2 miles below the junction of these streams, It is believed that the straightening of the tributary stream was an important factor in the increased deposition between 1930 and 1937 Computations show that in the reach of river studied approximately 30 per cent of the sediment was derived from the Maquoketa River."

Seeds

Davison, V. E. Shrubs by direct seeding. U. S. Soil Conserv. Serv. Soil Conserv.7(10):242-243,illus. Apr. 1942. 1.6 So3S

"Planting nursery-grown shrubs takes a lot of labor, and labor is scarce these days. In the Southeast a way has been found to establish certain shrubs by direct seeding. The simple and inexpensive way to to it has been perfected during 4 years of field-scale trial."

Soil Conservation

Allan, P. F., and Sime, P. R. Barbed wire conserves soil and wildlife. U. S. Soil Conserv. Serv. Soil Conserv.7(10):263-264. Apr. 1942. 1.6 So3S

Bennett, H. H. Total conservation. An introduction to this issue. U. S. Soil Conserv. Serv. Soil Conserv.7(10):233-235. Apr. 1942. 1.6 So3S

Bunce, A. C. Soil conservation means more livestock. Iowa Farm Economist 8(3):8. Mar. 1942. 275.28 Io92

Burch, J. W. Missouri farms are ready. Mo. Farmer 54(10):4,illus. May 15, 1942. 6 M696

"The coming of the war has not found Missouri farms unprepared for maximum wartime production, but on the contrary far better protected against soil erosion and fetility depletion than at any other time since World War 1."

Carnes, Ernest. Big-scale demonstration of putting soil conservation on the land. U. S. Soil Conserv. Serv. Soil Conserv.7(11):279-281,illus. May 1942. 1.6 So3S

Demonstrations held on farms in the Lower Saluda Soil Conservation District and in the Lynches River Soil Conservation District, South Carolina.

Enlow, C. R. Recruits for soil defense. Farm Jour.66(2):18,78-79, illus. Feb. 1942. 6 F2212

Hankins, M. J. Soil conservation helps cattle feeders. Nebr. Farmer 84(6):5,20,illus. Mar.21, 1942. 6 N27

Soil and moisture conservation makes livestock growing a safer business.

Harrison, E. Soil conservation work in Puerto Rico. Trop. Agr.29(3): 54-55. Mar. 1942. 26 T754

James, M. H. Model depicts defense of the soil. Outdoor Amer.7(4):7, illus. Feb. 1942. 410 Iz1

Uhland, R. E. The facts about conservation farming and yields. U. S. Soil Conserv. Serv. Soil Conserv.7(11):back cover, 266-269, 276,illus. May 1942. 1.6 So3S

Winters, N. E. Soil conservation gains new importance with food crops. Hawaii Farm and Home 4(9):7,20,illus. Sept. 15, 1941. 25 H5191
"Will democratic Hawaii conserve its soil? Are we really soil conscious in Hawaii? Are we erosion conscious? Will we, as a people, meet the challenge for the necessity of conserving and utilizing most efficiently our greatest natural resource, the only natural resource that Hawaii has?"

Soil Conservation Districts

Buie, T. S. Contributions which soil conservation districts can make toward an American war victory. Com. Fert.64(4):25-36. Apr. 1942. 57.8 C73
"A paper presented before Soil Conservation Section, Association of Southern Agricultural Workers, at Memphis, Tenn., on February 4, 1942."

Soil Erosion and Control

American society of agricultural engineers. Committee on erosion control. Subcommittee on erosion control in farm drainageways. Controlling erosion in farm drainageways. Agr. Engin.23(4):136-137. Apr. 1942. 58.8 Ag83

Combs, L. R. Let's solve soybean erosion problem! Soybean Digest 2(6):6-7,12,illus. Apr. 1942. 60.38 So89 cop.1

Cotton, John. Shore erosion on the Chesapeake. U. S. Soil Conserv. Serv. Soil Conserv.7(11):277-279,illus. May 1942. 1.6 So3S

Culbertson, R. E., and May, R. M. Planting spoil banks and ditches. U. S. Soil Conserv. Serv. Soil Conserv.7(10):260. Apr. 1942. 1.6 So3S

Elliott, J. A. The hope of No-Pone Valley. Better Crops with Plant Food 26(3):13-15,36-38,illus. Mar. 1942. 6 B46
No-Pone Valley in eastern Tennessee where erosion damage is everywhere in evidence.

Keegan, E. M. Erosion in southern Iowa. Natl. Catholic Rural Life Conf. Land and Home 5(1):22. Mar. 1942. 281.28 C28

Knoblauch, H. C., Kolodny, L., and Brill, G. D. Erosion losses of major plant nutrients and organic matter from Collington sandy loam. Soil Sci.53(5):369-378,illus. May 1942. 56.8 So3
"References," p.378.

Merrill, L. P. Grow the peanuts we need but save the soil. Farmer and Stockman 55(8):1,22,illus. Apr. 15, 1942. 6 Ok45

Wright, F. J. Erosional history of the Southern Appalachians. Jour. Geomorph.5(2):151-161. Apr. 1942. 331.8 J82

Soil Erosion and Control. Foreign Countries

Assignment of soil-conservation mission to Venezuela. For. Com. Weekly 6(3):29. Jan. 17, 1942. 157.54 F763

Goldstone, C. L. The menace of erosion. Tasmanian Jour. Agr.13(1): 9-11. Feb. 1, 1942. 23 T183T
Includes short discussion of erosion in Tasmania.

Gonggrijp, L. Het erosieonderzoek. Tectona 34(3/4):200-220. Mar./Apr. 1941. 99.8 B65

Dutch. Translated title: The erosion experiment.

"Experiments carried out near Tjiwidei, about 45 km. south of Bandoeng, Java, on volcanic soil at 1,800 m. altitude, showed that erosion was of little consequence during the first year after clearing virgin forest, amounting to only 0.17 kg./sq. m./year for terraced and o.53 kg./sq. m./yr. from the unterraced fields as compared with about 2.5 kg./sq. m./yr. from the terraced ones, thus indicating the necessity for terracing in the absence of forest cover. These experiments are to be continued, and a further series has been started in Teak forest areas on erodible marly and black soils." Abs. Forestry Abs. 3(3):197. 1942.

Hardy, W. D. Soil erosion prevention and control on the Southern Tableland. Agr. Gazette N. S. Wales 53(pt.3):113-117, illus. Mar. 1, 1942. 23 N472

"The Southern Tableland of New South Wales comprises a large tract of country which is favoured generally by good soaking autumn and spring rains, and accordingly the establishment of excellent pasture swards, particularly of subterranean clover is not a difficult matter. The development of a thick sward of vegetation (grasses and clovers) has been proved, time and time again, to be the cheapest and most effective of preventing soil erosion and of controlling soil erosion."

Masefield, G. B. Narrow-base ridges for erosion control. East African Agr. Jour.7(3):167-171. Jan. 1942. 24 Ea74

"Narrow-base ridges - locally known as 'bunds' - have been in use for some years in different parts of Uganda, and it is now possible to assess their usefulness for erosion control."

Staples, R. R. Combating soil erosion in the Central Province of Tanganyika Territory. Part 1. East African Agr. Jour.7(3):156-165, illus. Jan. 1942. 24 Ea74

"References," p.165.

To be continued.

Soil Mechanics

Watson, J. D. Soil mechanics applied to soil drainage. Roads and Streets 85(3):36-37, illus. Mar. 1942. 288.8 R536

Soil Moisture

Allyn, R. B. A calibrated soil probe for measuring field soil moisture. Soil Sci.53(4):273-285, illus. Apr. 1942. 56.8 So3

"A new device, known as the stabilimeter, for quick field determination of soil moisture conditions is described. The apparatus consists, essentially, of a diamond-shaped blade point mounted on a shaft, by means of which the blade point can be driven to the desired soil depths. The measurement of the resistance of the soil to rotation of this point is termed 'the soil stability' and is evaluated in terms of torque in inch-pound units by the use of an especially designed handle which may be attached quickly to the head of the shaft.

"This stability measurement, when correlated with the corresponding soil moisture content, shows a consistent relation by means of which soil moisture content may be estimated, usually within 0.5 per cent, in heavy soils such as were covered in this investigation. Use of stability measurements as a direct measure of soil moisture conditions is shown, and a generalized relationship is developed to facilitate the preparation of a soil moisture-stability calibration for an area without the necessity of detailed laboratory work.

"The range of soil types on which this method would satisfactorily operate was not determined, since the investigation was confined to heavy soils. It is believed, however, that satisfactory operation will be found on soils as light as clay loams and, quite possibly, on much lighter soils."

Cary, A. S., and Walter, B. H. Finding moisture content of soil by water displacement method. Engin. News-Rec.128(13):493-494, illus. Mar. 26, 1942. 290.8 En34

"Contents in brief - A method by which the moisture content of granular soil going into an earth dam can be determined within the desired limits of accuracy was developed in the soils laboratory of Mud Mountain Dam in Washington. Determinations can be made in less than ten minutes after the apparatus has been calibrated."

Soil Movement

Zing, A. W. Soil movement within the surface profile of terraced lands. Agr. Engin.23(3):93-94. Mar. 1942. 58.8 Ag83

"Soil movement on and from three terraced fields for 7 or 8-year periods has been studied by compositing three or four terrace profiles on each field.

"A marked parallelism was found to exist between the surface profile changes that have occurred in each field.

"Soil loss in run-off, as measured at the ends of the terrace channels, represents only a small portion of the soil movement to the terrace channels.

"Soil has been transferred from a terrace interval above to a lower adjacent interval by progression of the ridge location up the slope. The amount of such interchange has approximated soil loss from end of terrace channel.

"Present cropping practices and farming methods are leading to a condition of benching between ridges. The undesirability of this formation on Shelby and similar soils and possible corrective measures are discussed."

Discussion by Donald Christy, p.94.

"Paper presented before the American Society of Agricultural Engineers at its fall meeting at Chicago, December 1941."

Soil Permeability

Letkovski, A. I. The change in the permeability to water of sands and sandy soils under the influence of forest fellings. Lesnoe Khozyaystvo 1941, no.6, pp.11-17. 98.8 L562

"The investigation described was carried out in the Kirov region in young and in almost mature stands of Pinetum hylocomiosum and P.hypnosum, on sandy soils and sands, respectively. In both forest types and irrespective of the age of the stands, the permeability was satisfactory where the stand density exceeded 0.7, but where this density was about 0.4-0.6, the permeability was almost as poor as on clear-felled plots." Abst. Forest. Abst.3(4):288. 1942.

Soil Types

Vlasoff, P. I. Volume change and pore space of saturated and dry soil clods in relation to different soil types and land utilization. Soil Sci.53(3):187-193,illus. Mar. 1942. 56.8 So3

"A modification of Sideri's clod-saturation methods has been worked out for the determination of pore space of soil under natural conditions in this region.

"A limited number of data for pore space and volume changes of nine soil types were obtained by this modified method on soil samples taken from duplicate plots situated close together or far apart.

"The data tend to show that for reliable results the study of pore space on heavy-textured soils of the same type must be conducted on samples obtained from closely adjoining areas, for significant differences in values may be obtained when the sampling areas are far apart.

"The study of pore space at the different moisture contents employed in this work suggests the possibility of obtaining reliable information on soil-water relations, when control of a desirable soil structure is contemplated.

"Different land-use practices were found to be effective in altering the original pore-space capacity on some soils."

Terraces and Terracing

Howard, R. G. New Mexico farmer increases bean yield 879 pounds an acre. West. Farm Life 44(9):[3]. May 1, 1942. 6 R153

Zingg, A. W., and Whitt, D. M. Distribution of corn yields on farm terraces on the Shelby soil. Agr. Engin.23(4):126,128. Apr. 1942. 58.8 Ag83

Zingg, A. W. Terrace grades on Shelby soil as they affect soil and water losses. Agr. Engin.23(5):159-160,162,illus. May 1942. 58.8 Ag83

Discussion by Donald Christy, p.162.

Tillage

Aasheim, Torlief. Tillage for soil and water conservation. Experimentation at Havre and Culbertson. Mont. Farmer 20(16):4,illus. Apr. 15, 1942. 6 M764

Benton, R. J. Cultivation and irrigation practice. Citrus News 18(2): 20-21. Feb. 1942. 80 C494

Discusses ill effects of excess tillage.

Vegetation for Airfields

Monteith, John, jr. Turf for airfields and other defense projects. Turf Cult.2(4):193-239. Mar. 1942. 60.18 T843
A summary of available information on establishing turf, including a list of grasses and legumes that can be used.

Water Conservation

Holmgren, R. S. Water conservation in New Hampshire. New Eng. Water Works Assoc. Jour.56(1):1-7. Mar. 1942. 292.9 N44

Symposium on the conservation and control of fresh and underground waters. Fla. State Hort. Soc. Proc. (1941)54:87-97. 81 F66 54th 1941
Soil conservation in relation to water control, by C. D. Gunn, pp.87-89; Water control in reference to citrus groves, by A. V. Saurman, pp.89-92; Water control problems in the Kissimmee Valley, by June Gunn, pp.93-95; Water control from a municipal and agricultural standpoint, by Turner Wallis, pp.95-97.

Wildlife Conservation and Management

Allan, P. F. Defensive control of rodents and rabbits. Jour. Wildlife Mangt.6(2):122-132. Apr. 1942.
"Literature cited," pp.131-132.

Anderson, W. L. Adolph Lee looked ahead. U. S. Soil Conserv. Serv. Soil Conserv.7(10):251. Apr. 1942. 1.6 So3S
"A simple story of the benefits to wildlife on a Wisconsin farm where soil-conservation methods are in use."

Borell, A. E. More water and more wildlife. Ariz. Wildlife and Sportsman 4(4):5. Mar. 25, 1942. 410 Ar43

Davison, V. E. A better distribution of food and shelter. N. C. Wildlife Conserv.6(3):8-10,14,illus. Mar. 1942.

Davison, V. E. Bobwhite foods and conservation farming. Jour. Wildlife Mangt.6(2):97-109,illus. Apr. 1942.
"Literature cited," pp.108-109.

Davison, V. E. Soil conservation favors bobwhite. U. S. Soil Conserv. Serv. Soil Conserv.7(10):251-252. Apr. 1942. 1.6 So3S
"Land-use practices designed to conserve soil and moisture provide food for the bobwhite, as revealed by studies in the Southeast. An increased supply of quail - most valued game bird of the South - is shown to be closely correlated with soil and water conservation operations."

Edminster, F. C. More ruffed grouse from woodland management. U. S. Soil Conserv. Serv. Soil Conserv.7(10):261-262,illus. Apr. 1942. 1.6 So3S
"Lumber, posts, fuelwood, ties - these are not all that a northern woodland can produce. If management is properly planned, a goodly supply of ruffed grouse can be assured. Significantly, the best management methods for wood products, game bird, and soil conservation, are identical."

Evans, T. R. Soil conservation and wildlife. The Minnesota district plan. Minn. Dept. Conserv. Conserv. Volunteer 4(19):53-57. Apr. 1942. 279.8 C765
"District soil conservation program provides valuable aid to wildlife."

Hass, H. C. Sterile streams take on new life. U. S. Soil Conserv. Serv. Soil Conserv.7(10):263. Apr. 1942. 1.6 So3S

"Banks of streams are easily eroded, and have always been critical places as far as land use is concerned. They cannot be cultivated, nor should they be grazed except rarely. They can be used, however, to produce wildlife, if properly managed."

Hawbecker, A. C., and Bond, R. M. Wildlife increased by erosion control practices. U. S. Soil Conserv. Serv. Soil Conserv.7(10):255-256, illus. Apr. 1942. 1.6 So3S

"Substantial increases in wildlife have been observed repeatedly on farms where soil conservation measures have been put into effect. A painstaking count in California confirms the close relation between patterns of land use and wildlife numbers."

Pratt, H. P., and Long, W. S. Wildlife management on irrigated farms. U. S. Soil Conserv. Serv. Soil Conserv.7(10):257-258. Apr. 1942. 1.6 So3S

"Farmers who must pay a high price for irrigated land obviously cannot afford to use it wastefully. Yet spoil banks along hundreds of miles of irrigation ditches are usually productive of little more than a crop of weeds. By proper treatment, however, these noxious plants can be largely eliminated, the banks stabilized, and in the same operation the relatively abundant wildlife of irrigated farmland can be profitably increased."

Runkel, S. T. Furs - a million dollar resource in an agricultural state. U. S. Soil Conserv. Serv. Soil Conserv.7(10):237. Apr. 1942. 1.6 So3S

"Enough fur to supply all our needs has not been produced in the United States since pioneer days. War has simultaneously expanded the demand and cut off our foreign supplies. Some 70 percent of the wild fur crop is trapped each year on farms, and simple management measures applied to the wildlife lands of agriculture could increase this figure substantially."

Towns, H. G., and Burkhalter, H. D. Providing for wildlife in farm planning. U. S. Soil Conserv. Serv. Soil Conserv.7(10):254. Apr. 1942. 1.6 So3S

"To devote every parcel of land to its best and safest use is the goal of farm planning. An example from Louisiana demonstrates the method and discusses the results.

Wind Erosion and Control

Trenk, F. B. From blow sand to pine grove. Wis. Agr. and Farmer 69(7):4, illus. Apr. 4, 1942. 6 W751

Windbreaks

Fox, A. C. Windbreaks and their value to wildlife. U. S. Soil Conserv. Serv. Soil Conserv.7(10):259-260, illus. Apr. 1942. 1.6 So3S

"In a broad belt from the Canadian border to central Texas, windbreaks have been set against the strong winds of the Great Plains. In a virtually treeless land these rows of trees and shrubs shelter man and his livestock, check the drifting soil, and provide a haven for wildlife."

Woodlots

Bird, John. Don't wreck your woodlot for wartime profits. Country Gentleman 112(5):7,42-43,illus. May 1942. 6 C833
"Millions of acres of farm-owned trees are threatened with ruthless cutting for the mills ... but there's a way now to market your timber and at the same time improve the stand for future use."
The farm woodlot and the shelter-belt. Forest & Outdoors, Apr. 1942, pp.111-114,illus. 99.8 C16

BOOK AND PAMPHLET NOTES AND ABSTRACTS

Iowa academy of science. Proceedings ... for 1941. v.48, fifty-fifth annual session held at Indianola, April 25 and 26, 1941. 496pp., illus. Des Moines, 1941. 500 Io93 1941
"Adaptation studies of plants for soil conservation purposes in southern Iowa," by J. M. Aikman and Ivan L. Boyd, pp.117-121.
McDonald, Angus. Old McDonald has a farm. 278pp. Boston, Houghton Mifflin company, 1942. 120 M14
An informal story of a farmer-preacher who held the belief that a man has an obligation to the land he owns.
National research council. Division of geology and geography. Committee on sedimentation. Report ... 1940-1941. 110pp.,mimeogr. Washington, D. C., National research council, 1942. 400 N21 1940/41
Sedimentation studies by the Soil Conservation Service, 1940-1941, by Carl B. Brown, pp.26-34.
Nebraska. Department of roads and irrigation. Twenty-third biennial report ... Part 2 Bureau of irrigation water power and drainage 1939-1940. 863pp. Lincoln [1941]
Pearson, F. A. Statistical methods applied to agricultural economics. New York, J. Wiley & sons, inc., 1942. 251 P31
Robbins, W. W., Bellue, K., and Ball, W. S. Weeds of California. 491pp., illus. Sacramento, Calif., State Department of agriculture [1941] 79 R53
Scott, Winfield, and Paul, J. B. Permanent agriculture, a textbook of general agriculture. 614pp.,illus. New York, J. Wiley & sons, 1941. 30.2 Sco3
"References" at end of most of the chapters.
Taylor, C. F. Aeronautical meteorology. 455pp.,illus. New York, Chicago, Pitman publishing corporation [1941] 340 T21 1941
Contains bibliographies.
Revised and enlarged edition.
Weaver, H. S. Farm land appraising. 574pp. Kansas City, Mo., Weaver real estate appraisal service [1941] 282.12 W372
Weaver, J. E., and Hansen, W. W. Regeneration of native midwestern pastures under protection. Neb. Univ. Conserv. and Survey Div. Neb. Conserv. Bul.23. 91pp.,illus. Lincoln, June 1941. 279.9 N272B no.23
"Bibliography," p.91.
Wilde, S. A. Forest soils; origin, properties, relation to vegetation, and silvicultural management. 384pp. numb.l. Madison, Wis., 1941. 56.3 W64
Includes bibliographies.

STATE EXPERIMENT STATION AND EXTENSION PUBLICATIONS

Connecticut

Lunt, H. A. Forest lysimeter studies under hardwoods. Conn. Agr. Expt. Sta. Bul. 449. 572pp., illus. New Haven, 1941.

Indiana

Cole, R. O. Soil conservation in Indiana. Purdue Univ. Dept. Agr. Ext. Ext. Bul. 228, rev. 24pp., illus. Lafayette, Jan. 1942. 275.29 In2E

Iowa

Iowa agricultural experiment station. Report on agriculture research for the year ending June 30, 1931. Pt.1. 278pp., illus. Ames, 1941.
100 Io9 1940/41 pt.1
Soil Conservation Service, p.46.

Kansas

Anderson, K. L. Korean lespedeza in Kansas. Kans. Agr. Expt. Sta. Cir. 210. 12pp., illus. Manhattan, Dec. 1941. 100 K13S no.210

Maine

Maine, College of agriculture. Extension service. Soil conservation districts in Maine. Questions and answers. Prepared by the U. S. Soil conservation service and the Maine Agricultural extension service. Maine Ext. Cir. 153. folder. Orono, Jan. 1942. 275.9 M2810

Missouri

Clark, Marion, and Ricketts, Ralph. Home equipment to lay out guide for contour farming. Mo. Coll. Agr. Ext. Serv. Circ. 459. 8pp., illus. Columbia, 1942. 275.29 M69C no.459

Tascher, W. R., and Clark, M. W. Conserving soil with natural grass waterways. Mo. Agr. Col. Ext. Cir. 438. 8pp., illus. Columbia, Jan. 1942. 275.29 M69C

New York

Collison, R. C., and Carleton, E. A. Orchard covers and their relation to soil conservation. N. Y. State Agr. Expt. Sta. Bul. 701. 53pp., illus. Geneva, Mar. 1942. 100 N41 no.701

Oklahoma

Oklahoma agricultural experiment station. Soil defense in Oklahoma. A bibliography of soil conservation publications. Okla. Agr. Expt. Sta. Expt. Sta. Cir. No.C-97. 16pp. Stillwater, Apr. 1942. 100 Ok4

Pennsylvania

Cooper, A.E. "Homemade" strip farming. Pa. Agr. Ext. Serv. Cir. 233. 8pp., illus. State College, Jan. 1942. 275.29 P38C

South Carolina

South Carolina agricultural experiment station. Fifty-fourth annual report, 1940/41. 182pp., illus. Clemson, 1941. 100 So8 1940/41
Lysimeter investigations, pp.149-151.

Washington

Washington agricultural experiment station. Fifty-first annual report. Wash. Agr. Expt. Sta. Bul. 410. 142pp. Pullman, Dec. 1941. 100 W27E
Soil and water conservation experiment station, by Glenn M. Horner, pp.122-124; Nursery division Soil conservation service, by A. L. Hafenruchter, pp.124-130.

U. S. GOVERNMENT PUBLICATIONS

Agriculture Department

Crafts, E. C., and Glendenung, G. E. How to graze blue grama on southwestern ranges. U. S. Dept. Agr. Leaflet no.215. 8pp., illus. Washington, . U. S. Govt. print. off., 1942. 1 Ag84L
"On 48 million acres in Arizona and New Mexico, or more than a third of the total usable range in these States, as well as on ranges in adjacent Texas, blue grama is the dominant forage plant. Throughout this region, which is here loosely termed the Southwest, blue is of primary importance on 13 national forests, on other public lands, and on great acres of private range.
"There are three outstanding reasons for this superiority. Blue grama provides excellent forage, is highly resistant to grazing and drought, and is an effective soil binder. To a considerable degree the welfare of the livestock industry in the Southwest is dependent upon maintaining the dominance of blue grama and the further protection and extension of present well-established stands. For these reasons a widespread understanding of the simple principles of utilization and management required to maintain this high-grade forage and to make the most of its soil-protective characteristics is highly desirable."

U. S. Agricultural adjustment administration. Compilation of Soil conservation and domestic allotment act, as amended, Agricultural adjustment act of 1938, as amended, Federal crop insurance act, as amended, Sugar act of 1937, as amended, laws and executive orders concerning the Commodity crop corporation, related appropriations items, and miscellaneous laws as of the close of the first session of the Seventy-seventh Congress, January 2, 1942. Compiled under the direction of the Solicitor. 164pp. Washington, U. S. Govt. print. off., 1942. 1.42 Ad4Cs

U. S. Department of agriculture. Interbureau coordinating committee on post-war planning. Topical outline for state plan for land-resource conservation and development. For use by members of regional and state Committees on post-war planning. 27pp., mimeogr. Washington, D. C., 1942. 1.90 C2 In8Pt

U. S. Extension service. Security at the grass roots. A report of cooperative extension work in agriculture and home economics, 1940-41. Prepared by the Extension service. 62pp. Washington, U. S. Govt. print. off., 1941. 1 Ex892R 1940/41

U. S. Bureau of plant industry. Division of soil survey. Soil survey of Puerto Rico, by R. C. Roberts. 503pp., illus., maps in box. Washington, U. S. Govt. print. off., 1942. 1 So32F

"Literature cited," pp.492-495.

Soil Conservation Service

Bennett, H. H. Forestry in the southern conservation problem. 17pp., mimeogr., illus. Washington, U. S. Soil Conservation Service, 1942. 1.96 Ad62

Address, Southern Association for the advancement of science, Atlanta, Georgia, April 2, 1942.

Bennett, H. H. Soil and water - basic wartime resources. 19pp., mimeogr. Washington, D. C., 1942.

Address before the Seventh Annual North American Wildlife Conference, Toronto, Canada, April 10, 1942.

Blanchard, A. J., comp. Guayule: a list of references. U. S. Soil Conserv. Serv. Library. Soil Conserv. Bib. no.4. 53pp., mimeogr. Washington, D. C., 1942. 1.96 R312B no.4

Edminster, F. C. Wildlife management through soil conservation on farms in the northeast. U. S. Dept. Agr. Farmers' Bul. no.1868, rev. 1942. 52pp., illus. Washington, U. S. Govt. print. off., 1942. 1 Ag84F no.1868, rev. 1942

Hutchins, W. A. Selected problems in the law of water rights in the west. Prepared under the supervision of the Solicitor. U. S. Dept. Agr. Misc. Pub. 418. 513pp. Washington, U. S. Govt. print. off., 1942. 1 Ag84M no.418

Johnson, E. G. Plowing terraced land. U. S. Dept. Agr. Leaflet no.214. 6pp., illus. Washington, U. S. Govt. print. off., 1942. 1 Ag84L no.214

Mortlock, H. C., and Greenawalt, R. D. Erosion and related land use conditions on the Box Elder creek project, Nebraska. U. S. Soil Conserv. Serv. Erosion Survey no.22. 34pp., illus., maps in pocket. Washington, U. S. Govt. print. off., 1941. 1.6 So31 no.22

Parshall, R. L. Measuring water in irrigation channels. U. S. Dept. Agr. Farmers' Bul. 1683, rev. 30pp., illus. Washington, U. S. Govt. print. off., 1941. 1 Ag84F no.1683 rev. 1941

"This bulletin describes the Parshall measuring flume, the various weirs, and their adaptability to the measurement of irrigation deliveries to farms."

Powell, D. P., and Gay, C. B. Physical land conditions in Greene county, Georgia. U. S. Soil Conserv. Serv. Physical Land Surv. no.23. 53pp., illus., maps in pocket. Washington, U. S. Govt. print. off., 1941. 1.6 So31 no.23

Semple, A. T., and Hein, M. A. Pastures to hold and enrich the soil. U. S. Dept. Agr. Farmers' Bul. no.1900. 29pp., illus. Washington, U. S. Govt. print. off., 1942. 1 Ag84F no.1900

"Selected material on pastures," p.29.

Thornthwaite, C. W., and Holzman, Benjamin. Measurement of evaporation from land and water surfaces. U. S. Dept. Agr. Tech. Bul. no.817. 143pp., illus. Washington, U.S. Govt. print. off., 1942. 1 Ag84Te no.817

Bibliography, pp.66-75.

U. S. Soil conservation service. Conservation farming insures larger yields, by R. E. Uhland. 20pp., illus. Washington, 1942.

U. S. Soil conservation service. Conservation farming pays dividends in Illinois. 9pp., mimeogr. Urbana, Ill., 1942.

"Illinois farmers are finding that practical soil conservation measures increase yields and farm income. The soil conserving farmers are producing more and better balanced feed supplies and more livestock at lower costs. At the same time erosion control keeps the land in better condition for future production."

U. S. Soil conservation service. Cooperative research in hillculture studies at Floris, Iowa. 20 numb.l., illus. [Washington, D. C., 1942] 1.96 R31Cr Floris

"The pictures and text presented in this booklet were furnished by Gerald L. Barger, Ivan L. Boyd, Howard E. Brewer, C. Claude Lounsberry, Horas L. Shubert, Henry S. Ward, jr., Robert M. Warner, and J. M. Aikman, technical project leader, and are presented for the information of the Soil Conservation Service technicians, and are not for public distribution."

U. S. Soil conservation service. Cooperative research in soil and water investigations at Tucson, Arizona. 13 numb.l., illus. [Washington, D. C., 1942] 1.96 R31Cr Tucson

"The pictures and descriptions presented in this booklet were furnished by E. L. Beutner, project supervisor, Darwin Anderson, range ecologist, and Joel E. Fletcher, assistant soil technologist, at Tucson, Arizona, and are presented for the information of the Soil Conservation Service technicians, and are not for public distribution."

U. S. Soil conservation service. Facts farmers should know about soybeans, by R. E. Uhland. 6pp., mimeogr. [Washington, D. C., 1942] 1.96 Ad6U

U. S. Soil conservation service. Hydraulic studies of conservation structures at the Outdoor hydraulic laboratory, Spartanburg, South Carolina. 18 numb. l., illus. [Washington, D. C., 1942] 1.96 R31Cr Spartanburg.

"The pictures with descriptions presented in this booklet were furnished by W. O. Ree, project supervisor, and other members of the Hydrologic division at Spartanburg and are presented for the information of Soil Conservation Service technicians and are not for public distribution."

U. S. Soil conservation service. New landmarks of soil conservation. 20pp., illus. Washington, U. S. Govt. print. off., 1942. 1 Ag84M no.473

U. S. Soil conservation service. War emphasizes need for efficient production, by R. E. Uhland. 4 numb.l., mimeogr. [Washington, D. C.] 1942. 1.96 Ad6U

U. S. Soil conservation service. Engineering division. Drainage section. How to plan a tile drainage system, by John G. Sutton. 7pp., mimeogr. [Washington, D. C.] 1942

Address prepared for American society of agricultural engineers, South-

U. S. Soil conservation service. Division of information. Publications on water resources: their use and development in the western states (preliminary edition) compiled by Etta G. Rogers. U. S. Soil Conserv. Serv. SCS-MP-24. 43pp., mimeogr. Washington, D. C., 1941. 1.9 Ad6Mp no.24

U. S. Soil conservation service. Northern great plains. List of commercial sources of grass and legume seed adapted to the Northern great plains region. 6pp., mimeogr. Lincoln, 1942.

U. S. Soil conservation service. Northern great plains region. Project monograph. Box Elder creek demonstration project, Neb-2, Ralston, Nebraska. 26 numb.l., illus. Ralston, Neb., 1942. 1.9607 P942
Typewritten.

U. S. Soil conservation service. Northern great plains region. Project monograph. Plum creek project, No. Neb.-1, Albion, Nebraska. 92 numb. l., illus. Albion, Neb. [1942?] 1.9607 P942
Typewritten.

U. S. Soil conservation service. Northern great plains region. Project monograph. South branch of Park river. ND-1. Park River, North Dakota. 170 numb.l., illus. Park River, S. D. [1941] 1.9607 P942
Typewritten.

U. S. Soil conservation service. Northern great plains region. Project monograph. Winner-Dixon project SD-2, Winner, South Dakota, 52 numb.l., illus. Winner, S. D., 1942. 1.9607 P942
Typewritten.

U. S. Soil conservation service. Northern great plains region. Project monograph ... Wolsey-Shue creek demonstration project SD-1, Huron, South Dakota. 39 numb. l., illus. Huron, S. D., 1940. 1.9607 P942
Typewritten.

U. S. Soil conservation service. Northern great plains region. Save your soil. Establishing grass on unproductive cultivated land in a conservation program for your farm or ranch. U. S. Soil Conserv. Serv. North. Great Plains Reg. Cons. Fold. 7. folder, illus. Lincoln, Nebr., [1942] 1.6 So39C

U. S. Soil conservation service. Northern great plains region. Save your soil. Stock-water dugouts an aid to range management in a conservation program for your farm or ranch. U. S. Soil Conserv. Serv. North. Great Plains Reg. Conserv. Fold. 9. folder, illus. [Lincoln, 1942] 1.6 So39C no.9

U. S. Soil conservation service. Northern great plains region. Save your soil. Water spreading and flood irrigation in a conservation program for your farm or ranch. U. S. Soil Conserv. Serv. North. Great Plains Reg. Conserv. Folder 10. folder, illus. [Lincoln, 1942] 1.6 So39C no.10

U. S. Soil conservation service. Northern great plains region. Stock water dams in the Northern Great Plains in a conservation program for your farm or ranch. U. S. Soil Conserv. Serv. North. Great Plains Reg. Cons. Fold. 8. folder, illus. Lincoln, Neb., 1942] 1.6 So39C

U. S. Soil conservation service. Office of research. Hydrologic data, Blacklands experimental watershed, Waco, Texas, 1937-1939. U. S. Dept. Agr. Hydrologic Bul. no.2. 197pp. Washington, U. S. Govt. print. off., 1942. 1.Ag84Hb no.2

U. S. Soil conservation service. Southeast region. Progress report study soil conservation treatment on tobacco land Virginia and North Carolina [1930] 11 numb. l., mimeogr. [Spartanburg] 1941. 1.9602 P94 1940.

U. S. Soil conservation service. Southwest region. Erosion of stream banks, its prevention and correction, by F. H. Knapp and J. A. Libby. U. S. Soil Conserv. Serv. Southwest Reg. Reg. Bul. no.78. v.p., mimeogr. Albuquerque, N. Mex., 1942. 1.9608 R26 no.78
Engineering series no.6; Forestry series no.14.

U. S. Soil conservation service. Southwest region. Irrigated farm pastures for the state of New Mexico, by D. G. Craig and J. A. Downs. U. S. Soil Conserv. Serv. Southwest Reg. Reg. Bul. 80. 14pp., mimeogr. Albuquerque, N. Mex., 1942. 1.9608 R26 no.80
Agronomy series no.3.

U. S. Soil conservation service. Southwest region. Irrigated farm pastures for the state of Utah, by D. G. Craig and J. A. Downs. U. S. Soil Conserv. Serv. Southwest Reg. Reg. Bul. no.79. 14pp., mimeogr. Albuquerque, N. Mex., 1942. 1.9608 R26 no.79
Agronomy series no.2.

U. S. Soil conservation service. Southwest region. Small farmstead water developments in the southwest. U. S. Soil Conserv. Serv. Southwest Reg. Bul. 76. 40pp., mimeogr. Albuquerque, 1941. 1.9608 R26 no.76
Also Engineering series no.5.

U. S. Soil conservation service. Southwest region. Variety of grasses for better forage and livestock production, by J. L. Lantonand, and T. L. Hezzie. U. S. Soil Conserv. Serv. Southwest Reg. Reg. Bul. no.81. 7pp. [Albuquerque] 1942. 1.9608 R26 no.81
Range management series no.4.

U. S. Soil conservation service. Upper Mississippi region. Boost yields by contour farming (A farmers' guide in laying out key contour lines) 4pp., processed. [Milwaukee, 1942]

U. S. Soil conservation service. Upper Mississippi region. Grassed waterways are safe ways. (A farmers' guide in establishing sod in drainageways) 4pp., illus. [Lincoln, 1942]

U. S. Soil conservation service. Upper Mississippi region. Greener pastures (A farmers' guide to increased pasture yields.) 4pp., illus. [Lincoln, 1942]

U. S. Soil conservation service. Upper Mississippi region. Simple drainage practices boost yields. 4pp., illus. [Milwaukee, 1942]

Miscellaneous

U. S. Congress. House. Committee on appropriations. Agriculture department appropriation bill for 1942. Hearings before the subcommittee of the Committee on appropriations, House of representative, seventy-seventh Congress, second session on the Agriculture department appropriation bill for 1942. 2 parts. Washington, U. S. Govt. print. off., 1942. 1 Ag81Hes

U. S. Geological survey. Surface water supply of the United States, 1940. Part 7. Lower Mississippi river basin. U. S. Geol. Surv. Water-Supply Paper 897. 349pp. Washington, U. S. Govt. Print. off., 1941. 407 G29W no.897

Prepared in cooperation with the states of Arkansas, Colorado, Kansas, Kentucky, Louisiana, Mississippi, Missouri, New Mexico, Oklahoma, Tennessee, and Texas and other agencies.

U. S. Geological survey. Surface water supply of the United States, 1940. Pt. 9. Colorado river basin. U. S. Geol. Surv. Water-Supply Paper 899. 294pp. Washington, U. S. Govt. print. off., 1941. 407 G29W no.89

Prepared under the direction of Glenn L. Parker... in cooperation with the States of Arizona, Colorado, New Mexico, Utah and Wyoming.

U. S. Geological survey. Water levels and artesian pressure in observation wells in the United States in 1940. Part 2. Southeastern states, by O. E. Menizer, L. K. Wenzel and others. U. S. Geol. Surv. Water-Supply Paper 907. 120pp. Washington, U. S. Govt. Print. off., 1942. 407 G29W no.907.

Prepared in cooperation with the states of Alabama, Florida, Georgia, Maryland, Mississippi, North Carolina, South Carolina, Tennessee and Virginia, the District of Columbia and other agencies.

U. S. Bureau of standards. Current hydraulic laboratory research in the United States. Bul. X, Jan. 1942. U. S. Bur. Standards Hydraulic Lab. Bul. ser. A. 43pp., processed. Washington, D. C., 1942. 157.88 H99R